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(71)Applicant : ALPS ELECTRIC CO LTD

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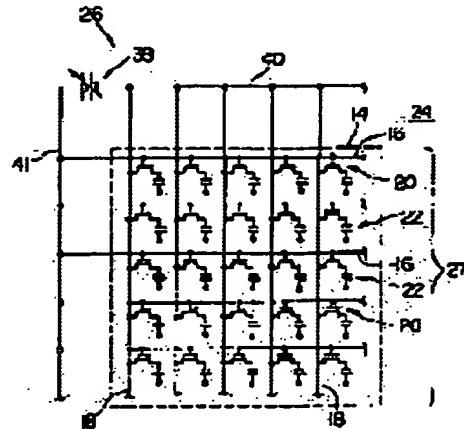
(72)Inventor : HEBIGUCHI HIROYUKI

(54) MATRIX WIRING SUBSTRATE AND ITS PRODUCTION

(57)Abstract

PURPOSE: To make remedy with static electricity for the matrix circuit board.

CONSTITUTION: Guard rings 40, 41 connected to circuit wirings 27 are formed to the outer peripheral part of the circuit wirings 27 of the matrix circuit board 26 constituted by forming the circuit wirings 27 having source wirings 18, gate wirings 16 and switching elements 20 arranged a matrix form on a substrate 24. Start controllers 38 for applying voltages to the circuit wirings 27 are formed in the guard rings 40, 41. The sure switching on of the switching elements 20 in the circuit wirings 27 is possible by previously applying the adequate voltages to the circuit wirings 27 by the start controllers 38. The electrification of pixel electrodes 22 is thus prevented and the deterioration of the switching elements 20 is prevented even if static electricity is generated.



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PATENT ABSTRACTS OF JAPAN

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(71)Applicant : ALPS ELECTRIC CO LTD

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(72)Inventor : HEBIGUCHI HIROYUKI

(30)Priority

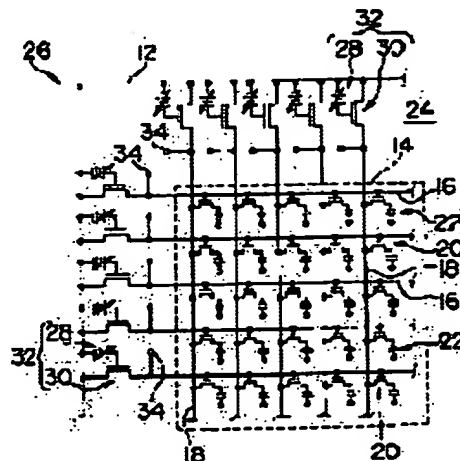
Priority number : 04143009 Priority date : 03.06.1992 Priority country : JP

(54) MATRIX WIRED BOARD AND ITS MANUFACTURE

(57)Abstract:

PURPOSE: To take an electrostatic countermeasure until a driving circuit is connected to the matrix wired board and to obtain the board which enables the early inspection of circuit wiring.

CONSTITUTION: On the matrix wired board 26 on which circuit electric conductors 16 and 18 are formed in matrix, a guard ring 12 which is connected to the circuit electric conductors 16 and 18 is formed at the outer peripheral part of the circuit electric conductors 16 and 18, and a connection/disconnection part 32 which controls the conduction between the circuit electric conductors 16 and 18 and guard ring 12 is interposed between the circuit electric conductors 16 and 18 and guard ring 12. The electric conductors 16 and 18 and guard ring 12 are electrically connected by making an external field on the connection/disconnection part 32 to short-circuit respective electric conductors among the circuit electric conductors and a potential difference due to static electricity between them is eliminated; and discharge is eliminated and the yield is improved.



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